

### Remarks

The Office Action objected to the presentation of trademarks, and to the extent possible, the Examiner's requirements have been complied with. However, as to the use of trademarks in the claims, in the textile industry, it is common for a trademark fiber or other chemical to maintain its properties over an extended period of time. In particular, in claims 4, 7, 10, 17 and 18, the trademarks are presented in conjunction with style designation numbers, such numbers may be changed if the formulation is changed, but it is unlikely the substance designated would vary, so it is believed that the claims maintain their definite in this.

The Office Action rejected claims 1-21 as being either anticipated by our obvious from the disclosure of U.S. Patent 6,265,920 to Rubin et al. These rejections are respectfully traversed.

The present invention relates to fabrics made with inherent flame resistant fiber. "Inherently flame resistance" is a term of art in the textile industry, as exemplified by the attached *Dictionary of Fiber & Textile Technology* providing a definition for "inherent flame resistance":

As applied to textiles, flame resistance that derives from an essential characteristic of the fiber from which the textile is made.

That is, the resistance is a property of the fiber, and is not derived from the application of a topical finish. All of the claims employ this claim language.

The Rubin et al. patent discloses a fabric which is subjected to a top coat to give it flame resistance (see column 4, lines 7-20). The fibers involved are described at column 3, line 16-27: none of the fibers listed there have inherent flame resistance, except for the fiberglass. According to Rubin, if fiberglass is used, it should be covered with a different fiber (column 6, lines 16-33), and none of Rubin's covering fibers are inherently flame resistant.

Thus, claim 1, which says that the finish applied on the inherently flame resistant fibers of the fabric distinguishes over the Rubin et al patent because to the extent that there are

inherently flame resistant core fibers, the finish would be applied to the covering, non-inherently flame resistant fibers.

Claim 19 says that the fabric is made of a plurality of inherently flame resistant polyester fibers. Rubin has no teaching of inherently flame resistant polyester fibers.

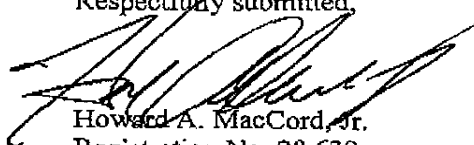
Claim 20 recites that the fabric consists of inherently flame resistant fibers, and Rubin has no disclosure of a greige fabric that has inherently flame resistant fibers.

Claim 43 recites that at least some yarns are formed entirely of inherently flame resistant fibers.

Claim 44 recites that the textile article is made of a homogenous mixture of inherently flame resistant fibers formed into a fabric, which distinguishes over the Rubin et al reference.

It is believed that this application is now in condition for allowance and same is earnestly solicited. Should the Examiner have any small matters requiring resolution, she is encouraged to telephone the undersigned for expeditious handling.

Respectfully submitted,



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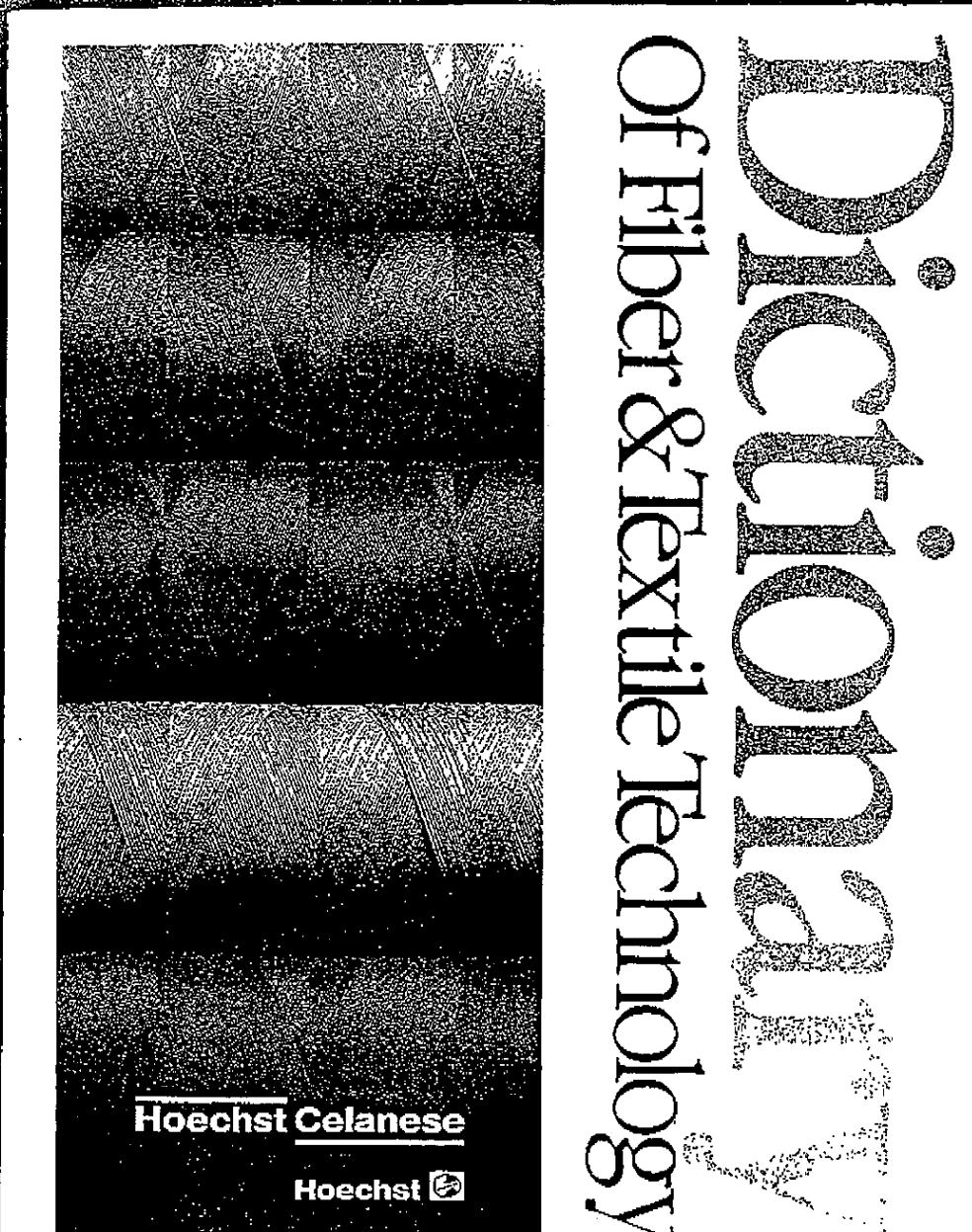
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**INSTRON TENSILE TESTER:** A high precision electronic test instrument designed for testing a variety of materials under a broad range of test conditions. It is used to measure and chart the load-elongation properties of fibers, yarns, fabrics, webbings, plastics, films, rubber, leather, paper, etc. May also be used to measure such properties as tear resistance and resistance to compression.

**INTAGLIO:** 1. Printing style in which the design is cut into the surface of the cylinder and is thus below the surface. 2. A lustrous, brocade pattern knitted in a tricot fabric.

**INTENSITY:** 1. The amount of energy per unit (space, charge, time). 2. The brilliance of a color. 3. The brightness of light.

**INTERFACIAL POLYMERIZATION:** Polymerization in which two reactive monomers, each dissolved in different solvents that are mutually immiscible, react at the interface between the two solutions.

**INTERFACING:** See INTERLINING.

**INTERLINING:** A padding or stiffening fabric used in garment manufacture to provide shape retention. Interlining is sandwiched between layers of fabric.

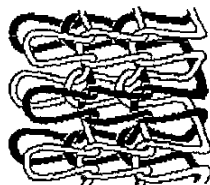
**INTERLOCK KNIT:** To produce an interlock knit, long and short needles are arranged alternately in both the dial and cylinder; the needles in the dial and cylinder are also positioned in direct alignment. When the long and short needles knit in alternate feeds in both needle housings, a fabric with a type of cross 1 x 1 rib effect is produced.

**INTERMINGLING:** 1. Use of air jets to create turbulence to entangle the filaments of continuous filament yarns, without forming loops, after extrusion. Provides dimensional stability and cohesion for further processing but is not of itself a texturing process. It is compatible with high-speed spin-drawing and high-speed take-up. When compared with twisting processes, it also permits increased take-up package size.

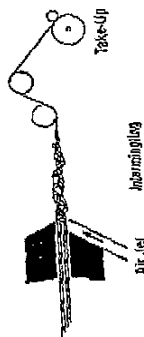
2. Combining two or more yarns via an intermingling jet. Can be used to get special effect yarns, i.e., mixing dye variants to get heather effects upon subsequent dyeing.

**INTERMITTENT PATTERN:** A pattern occurring in interrupted sequence.

**INTERNAL DYE VARIABILITY:** The change from point to point in dye uniformity across the diameter and along the length of the individual filaments. Affects appearance of the dyed product and is a function of fiber, dye, dyeing process, and dye bath characteristics.



Interlock knit  
positioning



Take-Up

Intermingling

Air Jet

**INDIGO:** Originally, a natural blue vat dye extracted from plants, especially the *Indigofera tinctoria* plant. Most indigo dyes today are synthetic. They are frequently used on dungarees and denims.

**INDUSTRIAL FABRIC:** A broad term for fabrics used for nonapparel and nondecorative uses. They fall into several classes: (1) a broad group including fabrics employed in industrial processes (e.g., filtering, polishing, and absorption); (2) fabrics combined with other materials to produce a different type of product (e.g., rubberized fabric for hose, belting, and tires; fabric combined with synthetic resins to be used for timing gears and electrical machinery parts; coated or enameled fabrics for automobile tops and book bindings; and fabrics impregnated with adhesive and dielectric compounds for applications in the electrical industry); and (3) fabrics incorporated directly in a finished product (e.g., sails, tarpaulins, tents, awnings, and specialty belts for agricultural machinery, airplanes, and conveyors). Fabrics developed for industrial uses cover a wide variety of widths, weights, and constructions and are attained, in many cases, only after painstaking research and experiment. Cotton and manufactured fibers are important fibers in this group, but virtually all textile fibers have industrial uses. The names mechanical fabrics or technical fabrics sometimes have been applied to certain industrial fabrics.

**INFLATABLE STRUCTURES:** Structures opened or enlarged by input of air and, once enlarged, able to retain the air to maintain the distended position.

**INFLOW QUENCH:** Cooling air for extruded polymer filaments that is directed radially inward across the path of the filaments. The threadline is completely enclosed in a quench cabinet in inflow quenching.

**INGRAIN:** See DYEING.

**INHERENT VISCOSITY:** See INTRINSIC VISCOSITY.

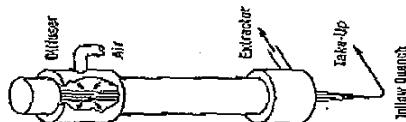
**INHERENT FLAME RESISTANCE:** As applied to textiles, flame resistance that derives from an essential characteristic of the fiber from which the textile is made.

**INHIBITOR:** A substance that retards or prevents a chemical or physical change. In textiles, a chemical agent that is added to prevent fading, degradation, or other undesirable effects.

**INITIAL MODULUS:** The slope of the initial straight portion of a stress-strain curve. The modulus is the ratio of the change in stress, expressed in newtons per tex, grams-force per tex, or grams-force per denier, to the change in strain expressed as a fraction of the original length.

**INITIATOR:** A chemical added to start a reaction such as polymerization. Unlike catalysts, initiators may be consumed during the reaction.

**INSPECTION:** The process of examining textiles for defects at any stage of manufacturing and finishing.



Extruder

Air

Extruder

Take-Up

Inflow Quench